

PATENT COOPERATION TREATY

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From the INTERNATIONAL SEARCHING AUTHORITY

To:
 HAMILTON, BROOK, SMITH
 & REYNOLDS, P.C.
 Attn. Carroll, Alice O.
 530 Virginia Road
 P.O. Box 9133
 Concord, MA 01742-9133
 UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF
 THE INTERNATIONAL SEARCH REPORT AND
 THE WRITTEN OPINION OF THE INTERNATIONAL
 SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing
 (day/month/year) 05/09/2005

Applicant's or agent's file reference
 3194.1038002

FOR FURTHER ACTION See paragraphs 1 and 4 below


International application No.
 PCT/US2005/003287

International filing date
 (day/month/year) 03/02/2005

Applicant
 MYKROLIS CORPORATION

FOREIGN DOCKETING
 10-5-05 ISR 12-5-05 WOF
 11-5-05 WOK
 4-9-05 WOF
 Completed By [Signature]

1. The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.
Filing of amendments and statement under Article 19:
 The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):
When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.
Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
 1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35.
For more detailed instructions, see the notes on the accompanying sheet.
2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.
4. **Reminders**
 Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.
 The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.
 Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.
 In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.
 See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority
 European Patent Office, P.B. 5818 Patentlaan 2
 NL-2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer
 Iveta Bujanska

C7

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 3194.1038002	FOR FURTHER ACTION		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2005/003287	International filing date (day/month/year) 03/02/2005	(Earliest) Priority Date (day/month/year) 05/02/2004	
Applicant MYKROLIS CORPORATION			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box II).

3. **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the drawings to be published with the abstract is Figure No. 6

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2005/003287

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

- 1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

- 2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

- 3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

- 1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

- 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

- 3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

- 4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12

This invention concerns a method of purifying a transfer container comprising the step of purging the transfer container with a gas having a certain concentration. The problem to be solved is to reduce device contamination.

2. claims: 13-21

This invention is directed to a method and a system of transferring an object from a transfer container to a sealed chamber. The problem to be solved is to improve the process control.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2005/003287

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L21/00 H01L21/68 B01D46/00 B01D50/00 F24F3/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L B01D F24F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/124906 A1 (SUZUKI YOKO ET AL) 12 September 2002 (2002-09-12) paragraphs [0011], [0220]; figures 57A, 57B	1-12
X	paragraphs [0243], [0245]; figure 68	13-21
X	EP 1 067 583 A (EBARA CORPORATION) 10 January 2001 (2001-01-10) paragraph [0042]; table 1	1-12
X	paragraphs [0020], [0043]; figures 5, 9	13-21
X	US 5 644 855 A (MCDERMOTT ET AL) 8 July 1997 (1997-07-08) column 9, line 29 - column 10, line 5	1-12
X	EP 1 182 694 A (TOKYO ELECTRON LIMITED) 27 February 2002 (2002-02-27) paragraphs [0041] - [0063]; figures 1, 2	13-21
	-/--	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 August 2005

Date of mailing of the international search report

05.09.05

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Angermeier, D

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2005/003287

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 169 272 A (BONORA ET AL) 8 December 1992 (1992-12-08) column 1, line 59 - column 2, line 28 -----	1-12

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2005/003287

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
US 2002124906	A1	12-09-2002	JP 2002261159 A	13-09-2002
			EP 1343202 A1	10-09-2003
			WO 0247152 A1	13-06-2002
			TW 533174 B	21-05-2003
			US 2004187451 A1	30-09-2004

EP 1067583	A	10-01-2001	JP 2001077188 A	23-03-2001
			EP 1067583 A2	10-01-2001
			TW 550220 B	01-09-2003
			US 2002129707 A1	19-09-2002
			US 6364922 B1	02-04-2002

US 5644855	A	08-07-1997	NONE	

EP 1182694	A	27-02-2002	JP 3552656 B2	11-08-2004
			JP 2002076090 A	15-03-2002
			JP 3642729 B2	27-04-2005
			JP 2002164406 A	07-06-2002
			EP 1182694 A2	27-02-2002
			TW 501194 B	01-09-2002
			US 2002048509 A1	25-04-2002

US 5169272	A	08-12-1992	DE 69115292 D1	18-01-1996
			DE 69115292 T2	27-06-1996
			EP 0556193 A1	25-08-1993
			JP 3576162 B2	13-10-2004
			JP 6501815 T	24-02-1994
			WO 9207759 A1	14-05-1992
			US 5547328 A	20-08-1996
US 5370491 A	06-12-1994			

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No. PCT/US2005/003287	International filing date (day/month/year) 03.02.2005	Priority date (day/month/year) 05.02.2004
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International Patent Classification (IPC) or both national classification and IPC.
H01L21/00, H01L21/68, B01D46/00, B01D50/00, F24F3/16

Applicant
MYKROLIS CORPORATION

1. This opinion contains indications relating to the following items:
- Box No. I Basis of the opinion
 - Box No. II Priority
 - Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - Box No. IV Lack of unity of invention
 - Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - Box No. VI Certain documents cited
 - Box No. VII Certain defects in the international application
 - Box No. VIII Certain observations on the international application



2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

<p>Name and mailing address of the ISA:</p> <div style="text-align: center;">  </div> <p>European Patent Office D-80293 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p>	<p>Authorized Officer</p> <p>Angermeier, D</p> <p>Telephone No. +49 89 2399-2283</p> <div style="text-align: right;">  </div>
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Box No. 1 Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - in written format
 - in computer readable form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

the entire international application,

claims Nos. 13-19

because:

the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 13-19 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

no international search report has been established for the whole application or for said claims Nos.

the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form has not been furnished

does not comply with the standard

the computer readable form has not been furnished

does not comply with the standard

the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

See separate sheet for further details

Box No. IV Lack of unity of invention

1. In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- paid additional fees.
 - paid additional fees under protest.
 - not paid additional fees.
2. This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- complied with
 - not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- all parts.
 - the parts relating to claims Nos.

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1, 20
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12, 20, 21
Industrial applicability (IA)	Yes: Claims	1-12, 20, 21
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2005/003287

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item III.

- 1.0 Although claims 13 and 19 have been drafted as separate independent method claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

Re Item IV.

The separate groups of inventions are:

1) Claims 1-12:

This invention concerns a method of purifying a transfer container comprising the step of purging the transfer container with a gas having a certain concentration.

The problem to be solved is to reduce device contamination.

2) Claims 13-21:

This invention is directed to a method and a system of transferring an object from a transfer container to a sealed chamber.

The problem to be solved is to improve the process control.

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT).

Re Item V.

- 1.0 The following documents (D) cited in the Partial International Search Report are pertinent to this communication, the numbering will be adhered to in the rest of the procedure:

D1: US 2002/124906 A1 (SUZUKI YOKO ET AL) 12 September 2002 (2002-09-12)

D2: EP-A-1 067 583 (EBARA CORPORATION) 10 January 2001 (2001-01-10)

- 2.0 The current application does not meet the requirements of Article 33(2) PCT, since the subject-matter of claims 1 and 20 is not new.
- 2.1 Regarding independent claim 1, Document D1 shows a method of purifying transfer container, comprising (see paragraphs 11 and 220, figures 57A and 57B): purging the transfer chamber with gas having a concentration of contaminants no greater than 100 part per trillion, the transfer chamber being not hermetically sealed.

Consequently, the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

- 2.2 Document D2 is likewise novelty-destroying for the subject-matter of claim 1 (cf. paragraph 42, table 1).
- 2.3 Regarding independent claim 20, Document D1 reveals likewise a system for transferring an object between two environments, comprising (cf, Figures 57A, 57B and 68, paragraphs 11, 220, 243 and 245):
- a) a non hermetically sealed transfer container, the container having an environment purged with a gas having a concentration of contaminants no greater than 100 parts per trillion,
 - b) a sealed chamber connected with the transfer container, and
 - c) a closable door configured to separate the environment of the sealed chamber from an environment of the transfer container when the door is closed.

Hence, the subject-matter of claim 20 lacks novelty in the sense of Article 33(2) PCT.

- 3.0 Dependent claims 2-12 and 21 not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

- The additional feature of the respective claims 2-12 and 21 is merely one of several straightforward possibilities from which the skilled person would select, in accordance

with circumstances, without the exercise of inventive skill (Article 33(3) PCT).

Re Item VII.

- 1) To meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1 and D2 should be identified in the description and their relevant contents should be indicated.
- 2) The feature of the claims 1-12 are not provided with reference signs placed in parentheses (Rule 6.2 (b) PCT).

Re Item VIII.

- 1.0 In claims 1, 5-9 and 20 the expression "about" is vague and imprecise. Therefore, the subject-matter of these claims is not clear (Article 6 PCT).